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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,973	07/03/2003	Heung-Yi Kim	1594.1239	4211
21171	7590	08/02/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			VAN, QUANG T	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/611,973	Applicant(s) KIM, HEUNG-YI	
	Examiner Quang T Van	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 7/3/03&7/19/04.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nutter (US 5,287,030) cited by applicant. Nutter discloses an electric motor construction comprising a stator (11); a rotor (12) surrounded by the stator (11); a rotating shaft (24) inserted into the rotor (12) that rotates with the rotor, the rotating shaft (24) extending from both ends of the rotor (12); a support unit (14) mounted to a front of the stator (11), and having a through hole to receive the rotating shaft (24); and a bearing (32) inserted in the through hole of the support unit (14) to rotatably hold the rotating shaft (24) passing through the bearing (32), a front part of the bearing extending outwardly from the through hole of the support unit (14) by a predetermined length to rotate both ends of the rotating shaft on a fixed axis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-11, 15-16, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nutter (US 5,287,030) cited by applicant, in view of Kim et al (US 6,528,773). Nutter discloses substantially all features of the claimed invention except a fan housing, a fan mounted to a side of the fan housing; and a fan motor rotate the fan, the fan motor being mounted to another side of the fan housing. Kim discloses a fan housing, a fan mounted to a side of the fan housing; and a fan motor rotate the fan, the fan motor being mounted to another side of the fan housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Nutter a fan housing, a fan mounted to a side of the fan housing; and a fan motor rotate the fan, the fan motor being mounted to another side of the fan housing as taught by Kim in order to circulate the air inside the microwave oven.

6. Claims 3-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nutter (US 5,287,030) cited by applicant, in view of Riback (US 4,862,026). Nutter discloses substantially all features of the claimed invention except the front part of the bearing is larger in diameter than the rear part of the bearing. Riback discloses a front part of the bearing (24) is larger in diameter than the rear part of the bearing (figure 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Nutter a front part of the bearing is larger in diameter than the rear part of the bearing as taught by Riback in order to fit tight in the boss to better support the rotating shaft on a fixed axis.

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7. Claims 12-14, 17-19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nutter (US 5,287,030) cited by applicant, in view of Kim et al (US 6,528,773) and further in view of Riback (US 4,862,026). Nutter/Kim disclose substantially all features of the claimed invention except the front part of the bearing is larger in diameter than the rear part of the bearing. Riback discloses a front part of the bearing (24) is larger in diameter than the rear part of the bearing (figure 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Nutter/Kim a front part of the bearing is larger in diameter than the rear part of the bearing as taught by Riback in order to fit tight in the boss to better support the rotating shaft on a fixed axis.

8. Claims 1, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umekage et al (US 5,393,961) in view of Palmer (US 3,699,368). Umekage discloses an air cooling fan arrangement in a microwave heating device comprising a fan housing (43, Figure 8); a fan (27) mounted to a side of the fan housing; and a fan motor (20) rotate the fan, the fan motor (20) being mounted to another side of the fan housing; an electric motor (Figure 5) construction comprising a stator (38); a rotor (37) surrounded by the stator (38); a rotating shaft (21) inserted into the rotor (37) that rotates with the rotor, the rotating shaft (21) extending from both ends of the rotor (37); a support unit (34) mounted to a front of the stator (38), and having a through hole to receive the rotating shaft (21). However, Umekage does not disclose a bearing inserted in the through hole of the support unit to rotatably hold the rotating shaft passing through the bearing, a front part of the bearing extending outwardly from the through

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hole of the support unit. Palmer discloses a bearing (14) inserted in the through hole of the support unit (15) to rotatably hold the rotating shaft (24) passing through the bearing (14), a front part of the bearing extending outwardly from the through hole of the support unit (Figure 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Umekage a bearing inserted in the through hole of the support unit to rotatably hold the rotating shaft passing through the bearing, a front part of the bearing extending outwardly from the through hole of the support unit as taught by Palmer in order to support and secure both ends of the rotating shaft on a fixed axis.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Gerber et al (US 3,711,732) discloses a miniature synchronous motor. Yang et al (US 5,990,467) discloses a microwave oven having improved structure for fixing a blower. Jun et al (US 5,477,036) discloses a microwave oven with a cooling arrangement.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QV

QV

July 29, 2004



Quang T Van
Primary Examiner
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